

LISTING OF CLAIMS:

1. (Currently Amended) A non-transitory computer-readable recording medium on which are recorded an index table, at least one application and an operation mode object, wherein the index table shows correspondence between the operation mode object and each title,

the operation mode object is either (i) a movie mode object for a movie mode or (ii) a virtual machine mode object for a virtual machine mode,

the movie mode object includes a navigation command showing a control procedure,

the virtual machine mode object includes an application management table,

each application is described in Java programming language, and stored in an archive file so that the application is readable into a heap area of a virtual machine, and

the application management table shows one or more application applications that has a life cycle bound to the title corresponding to the virtual machine mode object and a run attribute for each of the one or more applications for determining a run condition after a title switch.

2. (Currently Amended) The non-transitory computer-readable recording medium of Claim 1, wherein

the index table has a title number that uniquely identifies each title corresponding to an operation mode object number of the operation mode object described therein,

each archive file storing data and a class file that constitute a given application, and

the life cycle of the application is managed by describing an identifier of the archive file that stores the application into the application management table included in the virtual machine mode object.

3. (Currently Amended) A playback apparatus that simultaneously performs playback of a title, and execution of at least one application, the playback apparatus comprising:

a module manager operable select a current title from a plurality of titles based on an index table; and

a module operable to execute the application,

wherein [[the]] a recording medium has the index table, each application and an operation mode object recorded thereon,

the index table shows correspondence between the operation mode object and each title, the operation mode object is either (i) a movie mode object for a movie mode or (ii) a virtual machine mode object for a virtual machine mode,

the movie mode object includes a navigation command showing a control procedure,

the virtual machine mode object includes an application management table,

the application is a program described in Java programming language,

the application management table shows one or more applications that has a life cycle bound to the title corresponding to the virtual machine mode object and a run attribute for each of the one or more applications for determining a run condition after a title switch, [[and]]

the module includes an application manager operable to, each time a current title is newly selected from the plurality of titles, perform run control so as to run an application that has a life cycle bound to the current title and termination control so as to terminate an application that does not have a life cycle bound to the current title based on the application management table corresponding to the current title, and

the module, the module manager, and the application manager are each configured from hardware including a processor and a memory, and a program stored in the memory.

4. (Previously Presented) The playback apparatus of Claim 3, wherein the run control by the application manager includes control for, when a current title is newly selected from the plurality of titles, referring to the application management table to judge whether an application that has a life cycle bound to the current title exists, and, only when the application that has the life cycle bound to the current title exists, running the application that has the life cycle bound to the current title.

5. (Previously Presented) The playback apparatus of Claim 3, wherein the run control by the application manager includes control for, when a current title is newly selected from the plurality of titles, referring to the application management table of the current title to judge whether or not an application that does not have a life cycle bound to the current title exists, and only when the application that does not have the life cycle bound to the current title exists, terminating the application that does not have the life cycle bound to the current title.

Claims 6-11 (Cancelled)

12. (Currently Amended) A playback method for simultaneously performing playback of a title recorded on a recording medium, and execution of at least one application, the method comprising:

- a manager step for selecting a current title from a plurality of titles based on an index table; and

- a module step for executing the application,

- wherein the recording medium recorded thereon the index table, at least one application and an operation mode object,

- the index table shows correspondence between the operation mode object and each title, the operation mode object is either (i) a movie mode object for a movie mode or (ii) a virtual machine mode object for a virtual machine mode,

- the movie mode object includes a navigation command showing a control procedure,

- the virtual machine mode object includes an application management table, the application is a program described in Java programming language,

- the application management table shows one or more application applications that has a life cycle bound to the title corresponding to the virtual machine mode object and a run attribute for each of the one or more applications for determining a run condition after a title switch, and

- in the module step, each time the current title is newly selected from the plurality of titles, run control is performed so as to run an application that has a life cycle bound to the current title and termination control is performed so as to terminate an application that does not have a life cycle bound to the current title based on the application management table corresponding to the current title.